

WHAT IS CLAIMED IS:

1. An ultra-high molecular weight poly-gamma-glutamate (PGA) having a mean molecular weight greater than 5,000 kDa.
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2. The PGA according to claim 1, which has a mean molecular weight ranging from 5,000 to 15,000 kDa.
3. The PGA according to claim 1 or 2, which is produced by *Bacillus subtilis* var:
10 *chunkookjang* (KCTC 0697BP).
4. A hydrogel produced from the PGA according to any one of claims 1 to 3.
5. Cosmetics containing the PGA according to any one of claims 1 to 3.
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6. Foods containing the PGA according to any one of claims 1 to 3.
7. Feedstuffs containing the PGA according to any one of claims 1 to 3.
- 20 8. A water-absorbing agent containing the hydrogel according to claim 4.
9. A mineral absorption-promoting composition, which contains the PGA according to any one of claims 1 to 3, and a mineral.
- 25 10. The mineral absorption-promoting composition according to claim 9, which has a sustained release property.

11. The mineral absorption-promoting composition according to Claim 9, wherein the mineral is Ca, Fe, Mg, Zn, Cu or Se.
12. The mineral absorption-promoting composition according to claim 9, wherein the
5 PGA is substituted with a copolymer of an ultra-high molecular weight PGA having a mean molecular weight greater than 5,000 kDa and a polyamino acid bearing a positive charge.
13. The mineral absorption-promoting composition according to claim 12, wherein
10 the polyamino acid is polylysine or polyarginine.
14. A method for using the PGA according to any one of claims 1 to 3 for a mineral absorption-promoting agent.